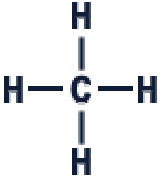
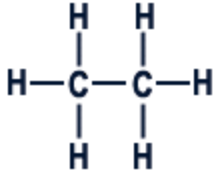
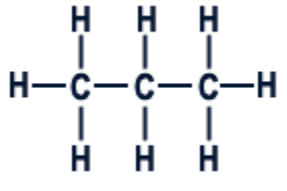
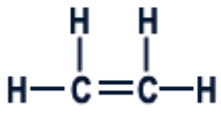

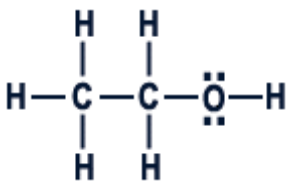
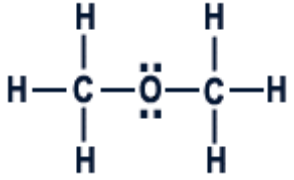


## Lewis Dot Structures For Organic Functional Groups

<b>1. Hydrocarbons</b>			
Saturated $\text{CH}_4$ 	Alkanes $\text{C}_2\text{H}_6$ 	$\text{C}_3\text{H}_8$ 	$\text{C}_n\text{H}_{2n+2}$
$n = 1$ $n = 2$ $n = 3$ $n = 4$ $n = 5$ $n = 6$ $n = 7$ $n = 8$	$\text{CH}_4$ $\text{C}_2\text{H}_6$ $\text{C}_3\text{H}_8$ $\text{C}_4\text{H}_{10}$ $\text{C}_5\text{H}_{12}$ $\text{C}_6\text{H}_{14}$ $\text{C}_7\text{H}_{16}$ $\text{C}_8\text{H}_{18}$	Methane Ethane Propane Butane Pentane Hexane Heptane Octane	
<b>Unsaturated</b>			
	<b>Alkenes</b> $n = 2$ $\text{C}_2\text{H}_4$ Ethlene $n = 3$ $\text{C}_3\text{H}_6$ Propene $n = 4$ $\text{C}_4\text{H}_8$ Butene		$\text{C}_n\text{H}_{2n}$
<b>Alkynes</b>			
	$n = 2$ $\text{C}_2\text{H}_2$ Ethyne $n = 3$ $\text{C}_3\text{H}_4$ Propyne $n = 4$ $\text{C}_4\text{H}_6$ Butyne		$\text{C}_n\text{H}_{2n-2}$
<b>2. Alcohols</b>			
	$n = 1$ $\text{CH}_3\text{OH}$ Methanol $n = 2$ $\text{C}_2\text{H}_5\text{OH}$ Ehanol $n = 3$ $\text{C}_3\text{H}_7\text{OH}$ Propanol $n = 4$ $\text{C}_4\text{H}_9\text{OH}$ Butanol		$\text{ROH}$
<b>3. Ethers</b>			
	$\text{CH}_3\text{OCH}_3$ <i>dimethyl ether</i> <sup>*1</sup>		$\text{ROR}$

<p>4. Aldehydes</p> $  \begin{array}{c}  \text{H} \quad \text{:O:} \\    \quad    \\  \text{H}-\text{C}-\text{C}-\text{H} \\    \\  \text{H}  \end{array}  $	<p>CH<sub>3</sub>CHO</p>	<p>RCHO</p> <p><i>ethanal</i><sup>*1</sup> (<i>acetaldehyde</i>)</p>
<p>5. Ketones</p> $  \begin{array}{c}  \text{H} \quad \text{:O:} \quad \text{H} \\    \quad    \quad   \\  \text{H}-\text{C}-\text{C}-\text{C}-\text{H} \\    \quad   \\  \text{H} \quad \text{H}  \end{array}  $	<p>CH<sub>3</sub>COCH<sub>3</sub></p>	<p>RCOR</p> <p><i>propanone</i><sup>*1</sup> (<i>acetone</i>)</p>
<p>6. Primary Amines</p> $  \begin{array}{c}  \text{H} \quad \text{H} \quad \text{H} \\    \quad   \quad   \\  \text{H}-\text{C}-\text{C}-\text{N}-\text{H} \\    \quad   \quad \cdot\cdot \\  \text{H} \quad \text{H}  \end{array}  $	<p>C<sub>2</sub>H<sub>5</sub>NH<sub>2</sub></p>	<p>RNH<sub>2</sub></p> <p><i>ethyl amine</i><sup>*1</sup></p>
<p>7. Carboxylic Acids</p> $  \begin{array}{c}  \text{H} \quad \text{:O:} \\    \quad    \\  \text{H}-\text{C}-\text{C}-\ddot{\text{O}}-\text{H} \\    \\  \text{H}  \end{array}  $	<p>CH<sub>3</sub>COOH</p>	<p>RCOOH</p> <p><i>ethanoic acid</i><sup>*1</sup> <i>acetic acid</i></p>